AMENDMENT TO THE CLAIMS

1. (Cancelled)

2. (Currently Amended) A method of producing an optical fiber preform by collapsing a glass pipe to obtain a solid body, the method comprising:

(a) a drying step to heat the glass pipe at a temperature of 550 °C or below and blowing an inert gas containing hydrogen atom-containing substances at a concentration of 10 vol. ppm or less through the inside of the glass pipe;

(b) a sealing step to seal one end of the glass pipe; and

(c) a collapsing step to collapse the glass pipe to obtain a solid body, wherein:

the drying step, the sealing step, and the collapsing step are performed in that order, and

in the collapsing step, the absolute pressure in the glass pipe is maintained at 4 kPa or below.

3. (Original) A method of producing an optical fiber preform as defined by claim 2, wherein in the drying step, the glass pipe is heated at a temperature of 60 °C or above.

4. (Original) A method of producing an optical fiber preform as defined by claim 2, wherein in the drying step, the glass pipe is heated at a temperature of 300 °C or above.

5. (Original) A method of producing an optical fiber preform as defined by claim 2, wherein in the drying step, the glass pipe is first heated at a temperature of 60 °C or above and lower than 200 °C and then heated at a temperature of 300 °C or above.

6. (Original) A method of producing an optical fiber preform as defined by claim 2, wherein in the drying step, the glass pipe is heated in a longitudinal range including and wider than the longitudinal range to be heated at a temperature of 550 °C or above in the sealing step or the collapsing step.

7. (Cancelled)

8. (Currently Amended) A method of producing an optical fiber preform as defined by claim [[7]] 2, wherein in the drying step, the volume of the inert gas blown per minute is at least 10 times the inner volume of the glass pipe in the longitudinal range heated in the drying step.

9. (Original) A method of producing an optical fiber preform as defined by claim 2, the method further comprising, before the drying step, a connecting step to connect a holding pipe to at least one end of the glass pipe.

10. (Currently Amended) A method of producing an optical fiber preform as defined by claim 2, wherein in the drying step, a pressure-changing cycle is performed at least once, the cycle comprising:

(a) a first stage in which [[the]] a remaining gas in the glass pipe is discharged to reduce the pressure inside the glass pipe; and

(b) a second stage in which ~~a dried~~ the inert gas is introduced into the glass pipe to raise the pressure inside the glass pipe.

11. (Original) A method of producing an optical fiber preform as defined by claim 9, wherein the holding pipe contains OH groups at a concentration of 10 wt. ppm or less.

12. (Previously Presented) A method of producing an optical fiber preform as defined by claim 9, wherein the holding pipe is provided with a portion that radiates to the outside of the pipe infrared rays travelling through a solid portion forming a wall of the pipe.

13. (Original) A method of producing an optical fiber preform as defined by claim 2, wherein in the drying step, the absolute pressure in the glass pipe is reduced to 4 kPa or below in at least one part of the drying step.

14. (Original) A method of producing an optical fiber preform as defined by claim 2, wherein the drying step is performed for at least one hour.

15. (Original) A method of producing an optical fiber preform as defined by claim 2, the method further comprising, before the drying step, a glass-depositing step to deposit a glass layer on the inner surface of the glass pipe.

16. (Original) A method of producing an optical fiber preform as defined by claim 2, the method further comprising, before the drying step, an assembling step to insert a glass rod into the glass pipe.

17. (Original) A method of producing an optical fiber preform as defined by claim 2, the method further comprising, before the drying step, an etching step to gas phase-etch the inner surface of the glass pipe.

18. (Original) A method of producing an optical fiber preform as defined by claim 17, the method further comprising, before the etching step, a preliminary drying step to dry the inside of the glass pipe.

19. (Original) A method of producing an optical fiber preform as defined by claim 17, wherein in the etching step, the etching is performed in a longitudinal range including and wider than the longitudinal range to be heated at a temperature of 550 °C or above in a step or steps to be performed afterward.

20. (Original) A method of producing an optical fiber preform as defined by claim 18, wherein in the etching step, the etching is performed in a longitudinal range including and wider than the longitudinal range to be heated at a temperature of 550 °C or above in a step or steps to be performed afterward.

21. (Original) A method of producing an optical fiber preform as defined by claim 2, the method further comprising, after the drying step, a chemically purifying step to heat the glass pipe while a gas containing chlorine-element-containing substances is blown through the inside of the glass pipe.

22. (Original) A method of producing an optical fiber preform as defined by claim 21, the method further comprising, after the chemically purifying step, an additional drying step to dry the inside of the glass pipe.

23. (Currently Amended) A method of producing an optical fiber preform as defined by claim 2, wherein after the sealing step, a pressure-changing cycle is performed at least once, the cycle comprising:

(a) a first stage in which [[the]] a remaining gas in the glass pipe is discharged to reduce the pressure inside the glass pipe; and

(b) a second stage in which a dried gas is introduced into the glass pipe to raise the pressure inside the glass pipe.

24. (Cancelled)

25. (Withdrawn) A method of producing an optical fiber preform by inserting a glass rod into a glass pipe to unify them, the method comprising the steps of:

(a) gas phase-etching the inner surface of a glass pipe;

(b) inserting a glass rod into the glass pipe;

(c) blowing a gas, containing hydrogen atom-containing substances at a concentration of 10 vol. ppm or less in total, through the inside of the glass pipe while the glass pipe and the glass rod are heated at a temperature of 60 to 550 °C;

(d) heating the glass pipe while blowing a gas containing chlorine atom-containing substances into the glass pipe;

(e) sealing one end of the glass pipe; and

(f) heating the glass pipe and the glass rod to unify them while maintaining the absolute pressure in the glass pipe at 4 kPa or below.

26. (Withdrawn) An optical fiber preform produced through a process comprising the steps of:

(a) heating a glass pipe at a temperature of 550 °C or below;

(b) sealing one end of the glass pipe; and

(c) collapsing the glass pipe to obtain a solid body;

the optical fiber preform being specified by the limitation that its portion formed by the interface portion at the time of the collapsing contains OH groups at a concentration of 100 wt. ppb or below.

27. (Withdrawn) An optical fiber produced by drawing an optical fiber preform produced through a process comprising the steps of:

(a) heating a glass pipe at a temperature of 550 °C or below;

(b) sealing one end of the glass pipe; and

(c) collapsing the glass pipe to obtain a solid body;

the optical fiber having an OH-originated loss of less than 0.5 dB/km at a wavelength of 1.38 μm.

28. (Currently Amended) A method of producing an optical fiber preform by collapsing a glass pipe to obtain a solid body, the method comprising:

(a) a drying step to heat the glass pipe at a temperature of 550 °C or below and blowing an inert gas containing hydrogen atom-containing substances at a concentration of 10 vol. ppm or less through the inside of the glass pipe;

(b) a sealing step to seal one end of the glass pipe; and

(c) a collapsing step to collapse the glass pipe to obtain a solid body while maintaining gas introduction and evacuating an inside of the glass pipe to reduce the absolute pressure to a range of 100 to 0.1 kPa, wherein

the drying step, the sealing step and the collapsing step are performed in this order.